REMARKS

The Examiner has rejected the claims as anticipated by or obvious over Makower et al.

Claims 74, 82, and 89, the currently pending independent claims, as amended, each include that a sensor is embedded within thermally conductive material by surrounding the sensor with thermally conductive material. Among other advantages, surrounding a sensor with thermally conductive material increases the effective surface area of the sensor, allowing a high energy content in a fluid medium to be detected and undesired tissue heating, or reheating, to be reduced (see, e.g., pages 18-21 of the specification).

Makower et al. does not describe or suggest at least the claimed sensor embedded within thermally conductive material by surrounding the sensor with thermally conductive material. While Makower et al. does state that sheath 82 can be conductive, temperature sensing device 46 of Makower et al. is, at most, on or along sheath 82, not embedded within the conductive material of the sheath by surrounding the temperature sensing device 46 with the conductive material of the sheath. Makower et al. also fails to recognize the advantages of embedding a sensor within thermally conductive material by surrounding the sensor with thermally conductive material.

Therefore, applicants submit that the claims are patentable over Makower et al. for at least the reasons discussed above.

The Examiner has rejected claims 90-93 under 35 U.S.C. 112, first paragraph, stating: "There is no disclosure in the originally filed specification that supports the step of "moving the energy delivery device back... and sensing an elevated temperature due to the increased thermal energy in the fluid medium [claim 90]" nor is there a recitation of adjusting the energy "to reduce stray contractions caused by increased thermal energy in the fluid medium [claim 93]."

Regarding claim 90, the Examiner is referred to, e.g., page 18, line 14 to page 19, line 19, and page 20, lines 3-16, which clearly disclose the language in question. Regarding claim 93, the Examiner is referred to, e.g., page 20, line 17 to page 21, line 10, which clearly disclose the language in question. Therefore, applicants request that the rejections under 35 U.S.C. 112 be withdrawn.

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Enclosed is a check in the amount of $18 for the excess claim fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: January 27, 2007

Phyllis K. Kristal
Reg. No. 38,524

Fish & Richardson P.C.
1425 K Street, N.W.
11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331

40137923.doc

Version with markings to show changes made

In the claims:

74. (Amended) An apparatus comprising:

an energy delivery device including a proximal portion and a distal portion, the energy delivery device being configured to deliver sufficient energy to a selected site to effect a contraction in at least a portion of collagen containing tissue at the selected site, the distal portion including a thermally conductive material; and

a sensor embedded within the thermally conductive material by surrounding the sensor with thermally conductive material, the sensor for detecting a thermal energy from the selected site and from an adjacent fluid medium, the sensor producing a thermal feedback signal which represents a composite of the thermal energy detected from the selected site of the collagen containing tissue and from the fluid medium, the energy delivery device including circuitry for supplying the thermal feedback signal to a feedback control system for adjusting a level of energy delivered by the energy delivery device to at least the portion of the selected site of the collagen containing tissue.

77. (Amended) The apparatus of claim 74, wherein the thermally conductive material that [embeds] surrounds the sensor extends from a distal tip of the energy delivery device to a position proximal to the sensor.

79. (Amended) The apparatus of claim 74, wherein the thermally conductive material that [embeds] surrounds the sensor forms at least part of an exterior surface of the energy delivery device.

82. (Amended) An apparatus comprising:

an energy delivery device including a proximal portion and a distal portion, the energy delivery device being configured to deliver sufficient energy to a selected site to effect a

contraction in at least a portion of collagen containing tissue at the selected site, the distal portion including a thermally conductive material;

a sensor embedded within the thermally conductive material by surrounding the sensor with thermally conductive material, the sensor for detecting a thermal energy from the selected site and from an adjacent fluid medium, the sensor producing a thermal feedback signal which represents a composite of the thermal energy detected from the selected site of the collagen containing tissue and from the fluid medium; and

a feedback control system coupled to the sensor and configured to receive the thermal feedback signal and adjust a level of energy delivered by the energy delivery device to at least the portion of the selected site of the collagen containing tissue.

85. (Amended) The apparatus of claim 82, wherein the thermally conductive material that [embeds] surrounds the sensor extends from a distal tip of the energy delivery device to a position proximal to the sensor.

86. (Amended) The apparatus of claim 82, wherein the thermally conductive material that [embeds] surrounds the sensor forms at least part of an exterior surface of the energy delivery device.

89. (Amended) A method of delivering energy, the method comprising:

providing an energy delivery device including a distal portion having a thermally conductive material;

delivering sufficient energy with the distal portion of the energy delivery device to a selected site to effect a contraction in at least a portion of collagen containing tissue at the selected site;

producing a thermal feedback signal which represents a composite of the thermal energy detected from the selected site of the collagen containing tissue and from a fluid medium with a sensor, the sensor being embedded within the thermally conductive material by surrounding the sensor with thermally conductive material; and

adjusting a level of energy delivered by the energy delivery device to at least the portion of the selected site based on the thermal feedback signal.

New claim 94 has been added.